

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

N 8900.139

National Policy

Effective Date:
11/19/10

Cancellation Date:
11/19/11

SUBJ: OpSpec/MSpec/LOA B034 - IFR Class I Terminal and En Route Navigation Using Area Navigation Systems

1. Purpose of This Notice. This notice provides guidance for aviation safety inspectors (ASI) assigned to operators conducting airplane operations under Title 14 of the Code of Federal Regulations (14 CFR) parts 91 (including part 91 subpart K (91K)), 121, 125 (including the Letter of Deviation Authority (LODA) A125 operators), and 135. Regarding the issuance of operations specification (OpSpec)/management specification (MSpec)/letter of authorization (LOA) paragraph B034, IFR Class I Terminal and En Route Navigation Using Area Navigation Systems, to incorporate new terminology equating Area Navigation (RNAV) 5 to Basic Area Navigation (B-RNAV).

2. Audience. The primary audience for this notice is Flight Standards District Office (FSDO), certificate-holding district office (CHDO), and International Field Office (IFO) ASIs. The secondary audience includes Flight Standards divisions and branches in the regions and in headquarters (HQ).

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators and the public can find this notice on the Federal Aviation Administration's (FAA) Web site at <http://fsims.faa.gov>.

4. Background. The standard OpSpec/MSpec/LOA B034 provided for the authorization to conduct instrument flight rules (IFR) Class I terminal and en route navigation (including operations outside positive radar control) using approved aircraft and RNAV systems, including the authorization to operate under IFR in European RNAV Airspace designated for B-RNAV. B-RNAV is defined as RNAV that meets a track keeping accuracy equal to or better than +/-5 nautical miles (NM) for 95 percent of the flight time. This value includes signal source error, airborne receiver error, display system error, and Flight Technical Error (FTE). This navigation performance assumes the necessary coverage provided by satellite or ground-based Navigational Aids (NAVAID) is available for the intended operation. European Regional Supplementary Procedures (SUPPS) for B-RNAV are contained in International Civil Aviation Organization (ICAO) Doc 7030-4, Rules of the Air, Air Traffic Services and Search and Rescue. ICAO Doc 9613, Performance-Based Navigation Manual contains guidance material concerning the implementation of Performance-based Navigation (PBN) systems.

5. Guidance. In accordance with the terminology adopted by ICAO Doc 9613, Part B, Chapter 2, B-RNAV requirements are termed RNAV 5. OpSpec/MSpec/LOA templates in the automated Operations Safety System (OPSS) have been updated to reflect this terminology change. Operational approval and airworthiness guidance to authorize B-RNAV is found in the current edition of Advisory Circular (AC) 90-96, Approval of U.S. Operators and Aircraft to Operate under Instrument Flight Rules (IFR) in European Airspace Designated for Basic Area Navigation (B-RNAV) and Precision Area Navigation (P-RNAV). B-RNAV/RNAV 5 must be authorized in Table 1 of OpSpec/MSpec/LOA B034. The Flight Technologies and Procedures Division (AFS-400), in cooperation with the Air Transportation Division (AFS-200) and the General Aviation and Commercial Aviation Division (AFS-800), and industry members of the Operations Specifications Working Group (OSWG) developed this notice. This notice contains the following:

- The sample OpSpec B034 template in Appendix A applies to parts 121, 125, and 135.
- The sample MSpec MB034 template in Appendix B applies to part 91K.
- The sample LOA B034 template in Appendix C applies to part 125M.
- The sample LOA B034 template in Appendix D applies to part 91.

Note: Inspector guidance will be incorporated into Order 8900.1, Volume 3, Chapter 18, Section 4, Part B Operations Specifications—En Route Authorizations and Limitations.

6. Action. Within 120 days after receipt of this notice distribute to assigned operators and review each operator's OpSpec/MSpec/LOA B034, and re-issue using the updated OpSpec/MSpec/LOA template.

7. Disposition. We will permanently incorporate the information in this notice in FSIMS before this notice expires. Direct questions concerning this notice to the Performance Based Flight Systems Branch (AFS-470) at 202-385-4623.

for



John M. Allen
Director, Flight Standards Service

Appendix A. Sample OpSpec Paragraph B034, IFR Class I Terminal and En Route Navigation Using Area Navigation Systems: 14 CFR Parts 121, 135, and 125

- a. Authorization. The certificate holder is authorized to conduct IFR Class I terminal and en route navigation (including operations outside positive radar control) using aircraft and RNAV systems approved by this paragraph in those areas of operations where this paragraph is referenced in B050 of these operations specifications.
- b. Approved Operations. If specified in Table 1 below, the certificate holder is authorized to conduct Precision RNAV (P-RNAV) and/or Basic RNAV (B-RNAV)/RNAV 5 operations in terminal and/or en route areas where this paragraph is referenced in paragraph B050 of these operations specifications.
- (1) The route design determines whether the operation is terminal or en route navigation.
 - (2) For B-RNAV/RNAV 5 terminal and en route operations, the navigation performance is ± 5 nautical miles (NM) for 95 percent of the flight time.
 - (3) For P-RNAV terminal and en route operations, the navigation performance is ± 1 NM for 95 percent of the flight time.
 - (4) If the RNAV equipment is certified for P-RNAV, it may be authorized for both P-RNAV and B-RNAV/RNAV 5 terminal and en route operations.
- c. Authorized En Route Navigation. Except as provided in these operations specifications, the certificate-holder shall not conduct any other IFR Class I en route navigation using RNAV systems.
- d. Authorized Aircraft Navigation Systems. The certificate holder is authorized to conduct IFR Class I terminal and en route navigation using the following aircraft and RNAV systems for the operations indicated in Table 1 below. If no specific navigation performance (for B-RNAV/RNAV 5 and/or P-RNAV) is authorized, enter N/A in column 4.

Table 1 – Aircraft, Navigation Systems, and Navigation Performance

Aircraft M/M/S	Area Navigation Systems		Navigation Performance	Limitations and Conditions
	Manufacturer	Model		

- e. Special En Route Limitations and Provisions. The certificate holder shall conduct all operations authorized by this paragraph in accordance with the following en route limitations and provisions:
- (1) Except when navigation is performed under the supervision of a properly qualified check airman, the flightcrew must be qualified in accordance with the certificate holder's approved training program for the system being used or have satisfactorily completed a flight check using the system. The flightcrew shall have satisfactorily completed the ground school portion of that training program before performing under the supervision of a check airman.
 - (2) The navigation system shall be fully operational or operating in accordance with the certificate holder's approved MEL when the system is used for any navigation.
 - (3) Prior to conducting operations in airspace that require a specific navigation performance, if authorized and listed in Table 1 above, the certificate-holder must ensure that the aircraft navigation system will provide the navigation performance for the planned flight time in that airspace.

(4) The RNAV systems used must permit the flight to navigate to the degree of accuracy or operational performance level required for ATC; be approved for the particular area of operation as specified in paragraph B050 of these operations specifications; and be certificated for IFR flight.

(5) IFR Class I navigation using a single RNAV system shall not be conducted unless Class I navigation with a single system is authorized by this paragraph and all of the following conditions are met:

(a) The redundant airborne equipment required to conduct IFR Class I navigation using airways navigation facilities is installed and operational.

(b) The capability exists at any point along the planned route of flight to safely return to and use airways navigation facilities for navigation if the single RNAV system fails.

(c) Any flight operated over off-airway routing is operated under ATC radar control.

(6) IFR Class I navigation, using a single RNAV system, shall not be conducted without at least one pilot using the facilities which define the airway or off-airway routing as the primary navigation reference unless the following conditions are met:

(a) The aircraft's present position and its relationship to NAVAID, airways, and any other Instrument Flight Procedure (IFP) specified in the currently effective ATC clearance are continuously displayed on each pilot's flight instruments.

(b) An indication is immediately provided on the forward instrument panel, within the normal FOV of each pilot, when the navigation performance of the RNAV system is insufficient to navigate to the degree of accuracy required for ATC.

(7) An approved RNAV system fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the aircraft to the degree of accuracy or navigation performance required for ATC over that portion of the flight.

Appendix B. Sample MSPEC Paragraph MB034, IFR Class I Terminal and En Route Navigation Using Area Navigation Systems: 14 CFR Part 91 Subpart K

- a. Authorization. The program manager is authorized to conduct IFR Class I terminal and en route navigation (including operations outside positive radar control) using aircraft and RNAV systems approved by this paragraph in those areas of operations where this paragraph is referenced in MB050 of these management specifications.
- b. Approved Operations. If specified in Table 1 below, the program manager is authorized to conduct Precision RNAV (P-RNAV) and/or Basic RNAV (B-RNAV)/RNAV 5 operations in terminal and/or en route areas where this paragraph is referenced in paragraph MB050 of these management specifications.
- (1) The route design determines whether the operation is terminal or en route navigation.
 - (2) For B-RNAV/RNAV 5 terminal and en route operations, the navigation performance is ± 5 nautical miles (NM) for 95 percent of the flight time.
 - (3) For P-RNAV terminal and en route operations, the navigation performance is ± 1 NM for 95% of the flight time.
 - (4) If the RNAV equipment is certified for P-RNAV, it may be authorized for both P-RNAV and B-RNAV/RNAV 5 terminal and en route operations.
- c. Authorized En Route Navigation. Except as provided in these management specifications, the program manager shall not conduct any other IFR Class I en route navigation using RNAV systems.
- d. Authorized Aircraft Navigation Systems. The program manager is authorized to conduct IFR Class I terminal and en route navigation using the following aircraft and RNAV systems for the operations indicated in Table 1 below. If no specific navigation performance (for B-RNAV/RNAV 5 and/or P-RNAV) is authorized, enter N/A in column 4.

Table 1 – Aircraft, Navigation Systems, and Navigation Performance

Aircraft M/M/S	Area Navigation Systems		Navigation Performance	Limitations and Conditions
	Manufacturer	Model		

- e. Special En Route Limitations and Provisions. The program manager shall conduct all operations authorized by this paragraph in accordance with the following en route limitations and provisions:
- (1) Except when navigation is performed under the supervision of a properly qualified check pilot, the flightcrew must be qualified in accordance with the program manager's approved training program for the system being used or have satisfactorily completed a flight check using the system. The flightcrew shall have satisfactorily completed the ground school portion of that training program before performing under the supervision of a check pilot.
 - (2) The navigation system shall be fully operational or operating in accordance with the program manager's approved MEL, when the system is used for any navigation.
 - (3) Prior to conducting operations in airspace that require a specific navigation performance, if authorized and listed in Table 1 above, the program manager must ensure that the aircraft navigation system will provide the navigation performance for the planned flight time in that airspace.

(4) The RNAV systems used must permit the flight to navigate to the degree of accuracy or operational performance level required for ATC; be approved for the particular area of operation as specified in paragraph MB050 of these management specifications; and be certificated for IFR flight.

(5) IFR Class I navigation using a single RNAV system shall not be conducted unless Class I navigation with a single system is authorized by this paragraph and all of the following conditions are met:

(a) The redundant airborne equipment required to conduct IFR Class I navigation using airways navigation facilities is installed and operational.

(b) The capability exists at any point along the planned route of flight to safely return to and use airways navigation facilities for navigation if the single RNAV system fails.

(c) Any flight operated over off-airway routing is operated under ATC radar control.

(6) IFR Class I navigation, using a single RNAV system, shall not be conducted without at least one pilot using the facilities which define the airway or off-airway routing as the primary navigation reference unless the following conditions are met:

(a) The aircraft's present position and its relationship to NAVAID, airways, and any other Instrument Flight Procedure specified in the currently effective ATC clearance are continuously displayed on each pilot's flight instruments.

(b) An indication is immediately provided on the forward instrument panel, within the normal FOV of each pilot, when the navigation performance of the RNAV system is insufficient to navigate to the degree of accuracy required for ATC.

(7) An approved RNAV system fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the aircraft to the degree of accuracy or navigation performance required for ATC over that portion of the flight.

Appendix C. Sample LOA Paragraph B034, IFR Class I Terminal and En Route Navigation Using Area Navigation Systems: 14 CFR Part 125M

Letter of Authorization IFR Class I Terminal and En Route Navigation Using Area Navigation Systems

- a. Authorization. The Operator/Company, authorized to conduct operations in accordance with the Letter of Deviation Authority (LODA A125), is authorized to conduct IFR Class I terminal and en route navigation (including operations outside positive radar control) using airplane(s) and RNAV systems approved by this document in those areas of operations where this authorization (B034) is referenced in the Operator/Company's B050 letter of authorization.
- b. Approved Operations. If specified in Table 1 below, the Operator/Company is authorized to conduct Precision RNAV (P-RNAV) and/or Basic RNAV (B-RNAV)/RNAV 5 operations in terminal and/or en route areas where this authorization is referenced in its B050 LOA.
- (1) The route design determines whether the operation is terminal or en route navigation.
 - (2) For B-RNAV/RNAV 5 terminal and en route operations, the navigation performance is ± 5 nautical miles (NM) for 95 percent of the flight time.
 - (3) For P-RNAV terminal and en route operations, the navigation performance is ± 1 NM for 95 percent of the flight time.
 - (4) If the RNAV equipment is certified for P-RNAV, it may be authorized for both P-RNAV and B-RNAV/RNAV 5 terminal and en route operations.
- c. Authorized En Route Navigation. Except as provided in this letter of authorization to conduct IFR terminal and en route navigation below 18,000 feet, the Operator/Company shall not conduct any other IFR Class I en route navigation using RNAV systems.
- d. Authorized Airplane Navigation Systems. The Operator/Company is authorized to conduct IFR Class I terminal and en route navigation using the following airplane and RNAV systems for the operations indicated in Table 1 below. If no specific navigation performance (for B-RNAV/RNAV 5 and/or P-RNAV operations in European airspace) is authorized, enter N/A in column 4.

Table 1 – Airplane(s), Navigation Systems, and Navigation Performance

Airplane M/M/S	Area Navigation Systems Manufacturer/Model	Navigation Performance	Limitations and Conditions

- e. Special En Route Limitations and Provisions. The Operator/Company shall conduct all operations authorized by this paragraph in accordance with the following en route limitations and provisions:
- (1) The flightcrew must be qualified in accordance with the Operator/Company's training program for the system being used or have satisfactorily completed a flight check using the system.
 - (2) The navigation system shall be fully operational or operating in accordance with the Operator/Company's approved MEL, when the system is used for any navigation.

(3) Prior to conducting operations in airspace that requires a specific navigation performance, if authorized and listed in Table 1 above, the Operator/Company must ensure that the airplane navigation system will provide the navigation performance for the planned flight time in that airspace.

(4) The RNAV systems used must permit the flight to navigate to the degree of accuracy or operational performance level required for ATC; be approved for the particular area of operation as specified in B050 letter of authorization; and be certificated for IFR flight.

(5) IFR Class I navigation using a single RNAV system shall not be conducted unless Class I navigation with a single system is authorized by this letter of authorization and all of the following conditions are met:

(a) The redundant airborne equipment required to conduct IFR Class I navigation using airways navigation facilities is installed and operational.

(b) The capability exists at any point along the planned route of flight to safely return to and use airways navigation facilities for navigation if the single area navigation system fails.

(c) Any flight operated over off-airway routing is operated under ATC radar control.

(6) IFR Class I navigation, using a single RNAV system, shall not be conducted without at least one pilot using the facilities which define the airway or off-airway routing as the primary navigation reference unless the following conditions are met:

(a) The airplane's present position and its relationship to NAVAID, airways, and any other Instrument Flight Procedure (IFP) specified in the currently effective ATC clearance are continuously displayed on each pilot's flight instruments.

(b) An indication is immediately provided on the forward instrument panel, within the normal FOV of each pilot, when the navigation performance of the RNAV system is insufficient to navigate to the degree of accuracy required for ATC.

(7) An approved RNAV system fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy or navigation performance required for ATC over that portion of the flight.

**Appendix D. Sample LOA Paragraph B034, Navigation Equipment Eligibility to
Operate in Terminal and En Route Airspace Designated as P-RNAV and/or
B-RNAV/RNAV 5 Airspace: 14 CFR Part 91**

**Letter of Authorization
Navigation Equipment Eligibility to Operate in Terminal and En Route Airspace
Designated as P-RNAV and/or B-RNAV/RNAV 5 Airspace**

- a. Authorization or Finding. TEXT01 TEXT02.
- b. Limitations and Provisions. The operator must conduct these operations in accordance with the limitations and provisions of this letter of authorization and is subject to the conditions that all operations conducted within that airspace are in accordance with:
- (1) Title 14 CFR part 91 and the flight rules contained in ICAO Annex 2, and
 - (2) All operations outside of the United States comply with part 91, § 91.703 and Annex 2.
- c. Authorized Aircraft. The operator is authorized to use the aircraft listed below for operations in designated Precision RNAV (P-RNAV) airspace when the required track-keeping equipment is approved and maintained. Compliance with P-RNAV equipment criteria includes approval for both P-RNAV and Basic RNAV (B-RNAV)/RNAV 5.

Table 1 - Aircraft Approved for P-RNAV and/or B-RNAV/RNAV 5

Serial Number	Registration Number	Aircraft M/M/S	Area Navigation System		Navigation Performance	Limitations and Conditions
			Manufacturer	Model		

- d. Crew Training. Crew training conducted by TEXT03.
- e. Responsible Person. The responsible person for crew operations may be either an agent for service (who must be a U.S. citizen) or a person who is a U.S. citizen or holds a U.S. pilot certificate and accepts responsibility for complying with the stated regulations by signing this document.
- (1) If the responsible person signing this letter of authorization relinquishes responsibility, this letter of authorization becomes invalid.
 - (2) Enter the name, e-mail address, and telephone number in Table 2 of the responsible person signing this letter of authorization:

Table 2 - Responsible Person

Name	E-mail Address	Telephone Number
TABL10	TABL51	TABL52